OVERVIEW
The United States was a world leader in the advancement of technology during the Industrial Age, and it continues
to hold a leadership role in the Information Age. In this event, students will investigate and determine the need
for an invention/innovation and then develop a final idea for it.

CHALLENGE
Participants investigate and determine the need for an invention or innovation of a device, system or process and
brainstorm possible solutions to determine the best idea for the invention or innovation.

All students will: 1) create either a 2D or 3D drawing and 2) develop a documentation notebook as they prepare
to promote and demonstrate their idea for the invention or innovation.

TIME LIMITS
All work must be completed during the current school year. Check the DUE DATES for entry submittals.

*PROCEDURE*

TSA Tryout Entry (ALL students)

A. Identify a need that has the potential for the invention of a device, system, or process and research issues and
gather information about the identified need.

B. Brainstorm ideas for possible inventions/innovations relative to the identified need; choose a final idea and work
on the design and details.

C. Develop a documentation notebook to feature the invention/innovation.

D. Provide a technical drawing to be turned in with the documentation notebook. The technical drawing can be
hand drawn with tools or done on the computer and printed.

E. The technical drawing and documentation notebook is due Monday, September 17 by 2:15pm to
Mr. Pawlowski (Library Office)...no exceptions!

F. The finalists will be posted on Friday, September 21, outside of the Library by 2:15pm.
TSA Tryout Entries - DUE Monday, September 17th by 2:15pm...no exceptions! The entire presentation will be submitted to Mr. Pawlowski.

A. The identified need must have the potential for an invention/innovation of a device, system or process.

B. The invention/innovation is not required to be a working invention/innovation. The idea for the invention/innovation is what is being evaluated; the student’s invention/innovation should be realistic and have the potential to be workable.

Technical Drawing (two pages max)
1. A “technical” drawing is a precise drawing done with a ruler (or other drawing tools) or on the computer of the invention/idea. The drawing does not have to be drawn to scale but can be. It can be 2-dimensional (orthographic) or 3-dimensional (isometric).

C. Documentation Presentation.

1. Title page, centered and in the following sequence: event title, and the school name.
2. Description page, explaining the identified need and the name of the invention/innovation, including a description of both; one (1) page using 10-12pt. font.
3. Brainstorming process showing the design process of your invention/innovation; one (1) page.
4. Plan of Work log that indicates preparation for the event, as noted by date, task, time involved, and comments (please use Plan of Work Log sheet attached to packet); one (1) page and hand written.

AND REMEMBER...
The goal of the student is to convince the judges that the invention/innovation is needed and has real potential. (judges assume the role of venture capitalists who are looking at inventions/innovations for investment purposes.)
**INVENTIONS AND INNOVATIONS**

2012 & 2013 OFFICIAL RATING FORM

**MIDDLE SCHOOL**

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>Minimal performance (1-4 points)</th>
<th>Adequate performance (5-8 points)</th>
<th>Exemplary performance (9-10 points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cover Page</td>
<td>Documentation is missing several components, and/or it is not complete.</td>
<td>Most documentation sections are included, but the section is loosely organized.</td>
<td>All sections are included; there is clear evidence of quality and completeness.</td>
</tr>
<tr>
<td>Title Page</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description Page</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brainstorm Process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan of Work Log</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**(60 points)**

*REMOVE FROM PACKET AND INCLUDE THIS DOCUMENT IN YOUR NOTEBOOK*

To be completed by judges!

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**Participant/Team ID#**

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**Static Entry (100 points)**

**Prototype, Model/prototype or drawing**

Description of need and invention/innovation is provided, but it is not clearly and concisely defined.

**Model/prototype or drawing**

Description of need and invention/innovation is clear and convincing.

**Model/prototype or drawing**

Description of need and invention/innovation is fully explained.

**Multimedia presentation**

(X1) Presentation is not complete; slides are missing and are of very poor quality.

Presentation is complete, but the quality and delivery fall short of the idea being featured.

Presentation clearly and sufficiently supports the problem and all aspects of the process that are featured.

**Identification of need**

(X1) There is little or no evidence presented to support the need.

Need is stated but it is not clearly defined.

The need and innovativeness of the invention/innovation is clearly evident.

**Description of invention/innovation**

(X1) Description is poorly written and lacking much necessary detail.

A description is provided, but it is not clearly and concisely defined.

Narrative provides an accurate depiction of the invention/innovation; need and use are developed or utilized.

**Overall effectiveness of presentation**

(X1) Presentation is not clear and lacks credibility; it is missing necessary details.

Presentation is clear but weak; it doesn’t have enough detail.

Presentation is excellent and generates a high degree of interest.

**Imagination**

(X1) Imagination.

(X1) Imaginative.

(X1) Imaginative.

**Motivating**

(X1) Motivating.

(X1) Motivating.

(X1) Motivating.

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**Overall effectiveness of presentation**

(X1) Presentation is not clear and lacks credibility; it is missing necessary details.

Presentation is clear but weak; it doesn’t have enough detail.

Presentation is excellent and generates a high degree of interest.

**Invention is realistic**

(X1) Invention is not sensible, practical.

Invention is realistic but not fully.

Invention accurately and appropriately applies the theory and science.
### INVENTIONS AND INNOVATIONS (continued)

**Semifinalist Interview/Presentation (60 points)**

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>Minimal performance 1-4 points</th>
<th>Adequate performance 5-8 points</th>
<th>Exemplary performance 9-10 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for invention/innovation/drawing (X1)</td>
<td>Little or no evidence is presented to support the need for the invention/innovation.</td>
<td>Need for the invention/innovation is stated, but it is not clearly defined.</td>
<td>The need and innovativeness of the invention/innovation is clearly evident.</td>
</tr>
<tr>
<td>Realistic/ workable idea (X1)</td>
<td>The idea is not sensible, practical, or rational in nature. (This applies to drawing.)</td>
<td>The idea is included, but it is of poor quality and not truly representative of the problem.</td>
<td>The ideas is provided and documented completely. (This applies to drawing.)</td>
</tr>
<tr>
<td>Model/prototype (X1)</td>
<td>Model/prototype is not displayed, or it is displayed but it shows little attention to detail or relation to the need; it is sloppy and lacks quality.</td>
<td>The model/prototype is displayed, but it is of poor quality; it is somewhat inventive in nature and provides a cursory concept to address the need for the invention/innovation.</td>
<td>Quality is clearly evident in the model/prototype; it is truly representative of the concept to address the need for the invention/innovation.</td>
</tr>
<tr>
<td>Use of audio/visual materials (including model/prototype) Presentation skills (X1)</td>
<td>Team is unorganized and unprepared for the presentation; team exhibits difficulty with transition of audio/visual materials, which are of poor quality.</td>
<td>Team seems prepared but it is somewhat disorganized in its transitions and use of audio/visual materials.</td>
<td>Team makes an excellent presentation with full confidence and presence.</td>
</tr>
<tr>
<td>Effective and convincing answers (X1)</td>
<td>Team offers vague and ineffective responses; teams lacks an understanding of the subject.</td>
<td>Team has a generalized understanding of the concepts discussed; some responses are vague.</td>
<td>Team exhibits a thorough understanding of all concepts and relative information.</td>
</tr>
<tr>
<td>Quality of presentation (X1)</td>
<td>Team’s presentation is thoughtless and ineffective; it lacks quality and organization.</td>
<td>Team’s presentation is systematic and comprehensive, but the presentation lacks many details and necessary information.</td>
<td>Team makes an ample and complete presentation; it effectively and clearly details the topic and process.</td>
</tr>
</tbody>
</table>

**SUBTOTAL (60 points)**

Rules violations (a deduction of 20% of the total possible points) must be initialed by the evaluator, coordinator and manager (120 points). Record the deduction in the space to the right.

Indicate the rule violated: ____________________

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I certify these results to be true and accurate to the best of my knowledge.

Evaluator

Printed name: ____________________  Signature: ____________________